IX. *English Reproduction Table.*
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In the office of reproduction there are concerned the male, the female, and their offspring. We represent the males at each year of age by l_x, the females by l_y, the children born of women at each age (*soboles*) by s_y; the children born in wedlock by s'_y, those born out of wedlock by s''_y.

The females are classified into the wives (*uxores*), the spinsters (*filiæ*), the widows (*viduæ*).

We take the wives, spinsters, and widows from the English Census of 1871, and portion out the P_y of the English life table on this basis; the offspring we take from Norwegian returns of 1871 and 1872, after reducing the relative proportions of legitimate and illegitimate births to the same as in England in those years. We take the statistics of children born to women of the several ages for Norway, because in England the age of the mother at the birth of her child is not given at the registry of the birth;[*] and comparing returns from Scotland, Norway, Sweden, and Denmark, that from Norway commends itself on the whole as the best adapted to our use.

The life table represents a stationary female population; and if we reckon the child-bearing period of life to include all ages between 15 and 55 years, we have a constant population of 11,248,950 to which to look for the sustentation of a population of the uniform strength, including males, of 40,858,184. Of these 11,248,950 women aged 15 to 55 years, 6,278,749 are wives, 4,265,622 are spinsters, and 704,579 are widows.

The wives give birth to 1,395,529 children, the spinsters and widows to 55,381 children; the total annual number of births, therefore, among such a population is 1,450,910.

Then by means of the following formulæ we can determine the number of children born to any given number of women of a specified age: thus

$$\frac{s_{20}}{P_{20}} = \cdot 08924, \text{ and } \cdot 08924 \times 100{,}000 = 8{,}924 = \text{ the number of children born in or}$$

out of wedlock to 100,000 women aged 20.

$$\frac{s'_{20}}{u_{20}} = \cdot 40070, \text{ or } 100{,}000 \text{ wives aged 20 bear } 40{,}070 \text{ children.}$$

[*] It is to be regretted that the mother's age at the birth of her child is not yet included in the particulars recorded in the English birth registers.

$$\frac{s''_{20}}{f_{20}+v_{20}} = \cdot 01070,\text{ or } 100{,}000 \text{ spinsters and widows bear } 1{,}070 \text{ illegitimate* children.}$$

$$\frac{s_{30}}{P_{30}} = \cdot 24634. \qquad\qquad \frac{s_{40}}{P_{40}} = \cdot 16303.$$

$$\frac{s'_{30}}{u_{30}} = \cdot 33652. \qquad\qquad \frac{s'_{40}}{u_{40}} = \cdot 21048.$$

$$\frac{s''_{30}}{f_{30}+v_{30}} = \cdot 02850. \qquad\qquad \frac{s''_{40}}{f_{40}+v_{40}} = \cdot 01024.$$

ESTIMATED female population of the child-bearing ages in Norway, 1871.

Ages.	Total women.	Wives.†	Spinsters and widows.†
15–55	475,446	231,644	243,802
15–20	84,855	911	83,944
20–25	74,974	14,701	60,273
25–30	66,583	32,689	33,894
30–35	55,272	37,839	17,433
35–40	55,063	40,932	14,131
40–45	51,170	39,823	11,347
45–50	46,076	34,861	11,215
50–55	41,453	29,888	11,565

BIRTHS of children at the various ages of their mothers in Norway, 1871–72.

Ages of mothers.	Births registered.‡ Mean of two years, 1871–72.			After reducing the relative proportions of total legitimate and illegitimate births to the same as in England, 1871–72.		
	Legitimate.	Illegitimate.	Total.	Total.	Legitimate.	Illegitimate.
15–55	47,027	4,649	51,676	51,676	48,826	2,850
15–20	277	210	487	487	358	129
20–25	5,216	1,654	6,870	6,870	5,856	1,014
25–30	11,493	1,539	13,032	13,032	12,089	943
30–35	11,650	717	12,367	12,367	11,927	440
35–40	10,669	348	11,017	11,017	10,804	213
40–45	6,219	145	6,364	6,364	6,275	89
45–50	1,446	32	1,478	1,478	1,458	20
50–55	57	4	61	61	59	2

* The terms *legitimate* and *illegitimate* in this paper are used in a sense to some extent conventional, since posthumous children, though legitimate, are counted with the illegitimate.

† The population at the several ages is here divided into the classes of married and unmarried in the same proportions as existed at the Census of 1865.

‡ There were 11,750 births of legitimate and 2,550 of illegitimate children the ages of whose mothers were not stated; they have been distributed proportionally over all the ages.

PROPORTIONS of children born annually to women of each age.

Age of mother. y.	Proportion of children born annually to *females* aged y. $\dfrac{s_y}{\mathrm{P}_y}$	Proportion of legitimate children born annually to *wives* aged y. $\dfrac{s'_y}{u_y}$	Proportion of illegitimate children born annually to *spinsters* and *widows* aged y. $\dfrac{s''_y}{f_y + v_y}$
15	·00036	·37959	·00010
16	·00137	·38714	·00050
17	·00588	·39297	·00154
18	·02155	·39713	·00449
19	·04684	·39968	·00757
20	·08924	·40070	·01070
21	·12253	·40023	·01381
22	·14776	·39834	·01682
23	·17349	·39510	·01966
24	·19658	·39056	·02225
25	·21589	·38480	·02453
26	·23080	·37786	·02641
27	·24119	·36982	·02782
28	·24570	·35827	·02869
29	·24728	·34725	·02894
30	·24634	·33652	·02850
31	·24332	·32591	·02729
32	·23848	·31520	·02524
33	·23410	·30655	·02348
34	·22881	·29757	·02149
35	·22235	·28779	·01937
36	·21446	·27674	·01721
37	·20484	·26395	·01507
38	·19330	·24896	·01337
39	·17945	·23129	·01174
40	·16303	·21048	·01024
41	·14376	·18606	·00892
42	·12141	·15757	·00784
43	·10156	·13244	·00643
44	·08206	·10762	·00509
45	·06346	·08379	·00385
46	·04631	·06163	·00274
47	·03115	·04182	·00178
48	·02047	·02778	·00110
49	·01221	·01677	·00060
50	·00633	·00880	·00028
51	·00275	·00387	·00014
52	·00137	·00197	·00004
53	·00042	·00062	..
54	·00006	·00009	..

NOTE.—The proportions shown in this table of legitimate births to wives, and of illegitimate births to unmarried women, were derived from the foregoing tables, giving the women of each class living in 1871 and the mean annual number of children born in and out of wedlock to mothers of several quinquennial ages in the two years 1871–72, the proportions being interpolated for each year of age. These proportions applied to the classes of married and unmarried women of the English life table population (so divided according to the Census of 1871) produced the numbers of legitimate and illegitimate children born annually to women of each age. The total births were obtained from the casting of the legitimate and illegitimate births, and the first column of this table was thus derived from a comparison of the total births with the total female population.

PROPORTIONS of children born annually to married and unmarried women of specified ages in Scotland, Norway, Sweden, and Denmark.

Proportions of children born annually to 1,000 women of specified ages.

Ages of mothers.	Scotland,* 1855.			Norway, 1871-72.			Sweden, 1871-75.			Denmark,† 1865-74.		
	Total children to 1,000 women of all classes.	Legitimate children to 1,000 wives.	Illegitimate children to 1,000 spinsters and widows.	Total children to 1,000 women of all classes.	Legitimate children to 1,000 wives.	Illegitimate children to 1,000 spinsters and widows.	Total children to 1,000 women of all classes.	Legitimate children to 1,000 wives.	Illegitimate children to 1,000 spinsters and widows.	Total children to 1,000 women of all classes.	Legitimate children to 1,000 wives.	Illegitimate children to 1,000 spinsters and widows.
15–55	120·86	252·22	18·43	108·69	210·78	11·69	110·04	206·65	23·73	114·11	195·17	24·06
15–20	19·55	564·03	7·86	5·74	392·97	1·54	9·00	507·04	4·04	10·15	530·22	5·02
20–25	144·85	475·80	34·41	91·63	398·34	16·82	104·84	495·12	32·98	117·98	478·28	38·52
25–30	227·07	406·60	36·36	195·73	369·82	27·82	200·97	382·23	51·59	221·72	380·79	52·17
30–35	223·63	336·52	23·78	223·75	315·20	25·24	227·95	327·03	50·61	240·93	312·48	43·03
35–40	185·28	268·68	13·84	200·08	263·95	15·07	201·62	263·71	38·60	197·70	235·29	31·60
40–45	83·86	125·84	4·05	124·37	157·57	7·84	116·86	151·74	17·74	101·55	119·41	13·02
45–50	12·81	19·96	·51	32·08	41·82	1·78	17·55	23·58	1·66	11·92	14·24	1·54
50–55	·63	1·12	··	1·47	1·97	·17	·30	·42	·06	·06	·08	··

* The proportions for Scotland are derived from data relating to the year 1855, published in the supplement to the Scotch Registrar-General's Annual Reports for the ten years 1861–70.

† Exclusive of Copenhagen.

English Life and Birth Table.

Age. y	Females living at age y by the English life table out of 1,000,000 children born alive, of whom 488,255 are girls.					Children born alive annually, in and out of wedlock, to women living at age y (soboles).			Age. y
	Females living at each age. l_y	Female population in each year of age. $P_y = l_{y+\frac{1}{2}}$	Classes of the population.			Legitimate and illegitimate. s_y	Legitimate. s'_y	Illegitimate. s''_y	
			Wives (uxores). u_y	Spinsters (filiæ). f_y	Widows (viduæ). v_y				
15	340,273	339,344	228	339,104	12	121	87	34	15
16	338,385	337,390	756	336,608	26	461	293	168	16
17	336,356	335,277	3,721	331,512	44	1,973	1,462	511	17
18	334,151	332,977	14,469	318,390	118	7,176	5,746	1,430	18
19	331,751	330,473	33,097	297,111	265	15,479	13,228	2,251	19
20	329,142	327,739	65,997	261,034	708	29,246	26,445	2,801	20
21	326,323	324,895	91,408	232,333	1,154	39,808	36,584	3,224	21
22	323,456	322,005	110,512	209,819	1,674	47,578	44,021	3,557	22
23	320,544	319,073	130,732	185,995	2,346	55,355	51,652	3,703	23
24	317,592	316,102	149,620	163,338	3,144	62,140	58,436	3,704	24
25	314,603	313,095	166,304	142,740	4,051	67,595	63,994	3,601	25
26	311,579	310,056	180,312	124,697	5,047	71,560	68,133	3,427	26
27	308,524	306,985	191,528	109,348	6,109	74,043	70,831	3,212	27
28	305,440	303,887	200,095	96,570	7,222	74,666	71,688	2,978	28
29	302,328	300,762	206,298	86,094	8,370	74,371	71,637	2,734	29
30	299,190	297,611	210,482	77,583	9,546	73,314	70,831	2,483	30
31	296,027	294,437	212,999	70,700	10,738	71,641	69,419	2,222	31
32	292,840	291,238	214,176	65,121	11,941	69,453	67,508	1,945	32
33	289,631	288,017	214,303	60,583	13,131	67,426	65,695	1,731	33
34	286,398	284,773	213,849	56,552	14,372	65,159	63,635	1,524	34
35	283,143	281,506	212,877	52,967	15,662	62,593	61,264	1,329	35
36	279,864	278,216	211,447	49,773	16,996	59,665	58,516	1,149	36
37	276,563	274,903	209,608	46,922	18,373	56,310	55,326	984	37
38	273,237	271,565	207,405	44,370	19,790	52,494	51,636	858	38
39	269,887	268,202	204,875	42,068	21,244	48,129	47,386	743	39
40	266,511	264,813	202,056	40,026	22,731	43,172	42,529	643	40
41	263,109	261,397	198,974	38,174	24,249	37,578	37,021	557	41
42	259,678	257,952	195,657	36,500	25,795	31,318	30,830	488	42
43	256,219	254,478	192,125	34,984	27,369	25,846	25,445	401	43
44	252,729	250,972	188,400	33,605	28,967	20,594	20,276	318	44
45	249,207	247,434	184,495	32,350	30,589	15,701	15,459	242	45
46	245,652	243,861	180,424	31,201	32,236	11,294	11,120	174	46
47	242,061	240,252	176,198	30,147	33,907	7,483	7,369	114	47
48	238,434	236,606	171,826	29,176	35,604	4,844	4,773	71	48
49	234,769	232,922	167,315	28,277	37,330	2,845	2,806	39	49
50	231,064	229,196	162,668	27,443	39,085	1,450	1,431	19	50
51	227,318	225,430	157,891	26,663	40,876	620	611	9	51
52	223,530	221,620	152,984	25,930	42,706	304	301	3	52
53	219,698	217,766	147,949	25,237	44,580	92	92	..	53
54	215,822	213,723	142,689	24,562	46,472	13	13	..	54
55	211,576	209,380	137,136	23,888	48,356	..	..	..	55
56	207,137	204,847	131,373	23,218	50,256	..	..	..	56
57	202,509	200,124	125,405	22,549	52,170	..	..	..	57
58	197,692	195,211	119,245	21,871	54,095	..	..	..	58
59	192,683	190,105	112,900	21,179	56,026	..	..	..	59
60	187,477	184,798	106,381	20,464	57,953	..	..	..	60
61	182,068	179,285	99,705	19,718	59,862	..	..	..	61
62	176,449	173,559	92,889	18,935	61,735	..	..	..	62
63	170,614	167,614	86,007	18,117	63,490	..	..	..	63
64	164,557	161,444	79,302	17,307	64,835	..	..	..	64

English Life and Birth Table (continued).

Age. y	Females living at age y by the English life table out of 1,000,000 children born alive, of whom 488,255 are girls.					Children born alive annually, in and out of wedlock, to women living at age y (soboles).			Age. y
	Females living at each age. l_y	Female population in each year of age. $P_y = l_{y+\frac{1}{2}}$	Classes of the population.			Legitimate and illegitimate. s_y	Legitimate. s'_y	Illegitimate. s''_y	
			Wives (uxores). u_y	Spinsters (filiæ). f_y	Widows (viduæ). v_y				
65	158,275	155,049	72,797	16,502	65,750	..	..	..	65
66	151,766	148,428	66,510	15,700	66,218	..	..	..	66
67	145,035	141,588	60,457	14,900	66,231	..	..	..	67
68	138,088	134,538	54,654	14,097	65,787	..	..	..	68
69	130,939	127,295	49,112	13,293	64,890	..	..	..	69
70	123,607	119,881	43,845	12,485	63,551	..	..	..	70
71	116,118	112,325	38,865	11,672	61,788	..	..	..	71
72	108,505	104,664	34,183	10,854	59,627	..	..	..	72
73	100,807	96,941	29,814	10,015	57,112	..	..	..	73
74	93,071	89,204	25,753	9,183	54,268	..	..	..	74
75	85,347	81,508	22,009	8,362	51,137	..	..	..	75
76	77,694	73,913	18,591	7,553	47,769	..	..	..	76
77	70,173	66,480	15,507	6,763	44,210	..	..	..	77
78	62,844	59,273	12,757	5,995	40,521	..	..	..	78
79	55,773	52,352	10,339	5,258	36,755	..	..	..	79
80	49,018	45,777	8,245	4,555	32,977	..	..	..	80
81	42,636	39,601	6,463	3,892	29,246	..	..	..	81
82	36,677	33,869	4,972	3,278	25,619	..	..	..	82
83	31,181	28,616	3,740	2,716	22,160	..	..	..	83
84	26,178	23,868	2,784	2,236	18,848	..	..	..	84
85	21,688	19,637	2,050	1,825	15,762	..	..	..	85
86	17,716	15,924	1,491	1,477	12,956	..	..	..	86
87	14,258	12,717	1,071	1,183	10,463	..	..	..	87
88	11,296	9,992	758	936	8,298	..	..	..	88
89	8,802	7,719	529	730	6,460	..	..	..	89
90	6,739	5,857	363	561	4,933	..	..	..	90
91	5,066	4,361	245	423	3,693	..	..	..	91
92	3,735	3,183	162	313	2,708	..	..	..	92
93	2,698	2,275	105	226	1,944	..	..	..	93
94	1,908	1,592	69	160	1,363	..	..	..	94
95	1,320	1,088	45	110	933	..	..	..	95
96	892	726	29	73	624	..	..	..	96
97	588	473	19	47	407	..	..	..	97
98	378	300	13	29	258	..	..	..	98
99	236	185	7	18	160	..	..	..	99
100	144	111	5	10	96	..	..	..	100
101	85	65	3	6	56	..	..	..	101
102	49	37	2	3	32	..	..	..	102
103	27	20	1	2	17	..	..	..	103
104	15	11	..	1	10	..	..	..	104
105	8	5	..	1	4	..	..	..	105
106	4	3	..	..	3	..	..	..	106
107	2	1	..	..	1	..	..	..	107
108	1	1	..	..	1	..	..	..	108
109	..	..	..	..	..	..	..	..	109

ENGLISH Life and Birth Table (continued).

Age. y	Total female population at and above each age y. Q_y	Of the total female population at and above each age y, the number of			Children born annually to women of the age y and upwards.			Age. y
		Wives (uxores). U_y	Spinsters (filiæ). F_y	Widows (viduæ). V_y	Legitimate and illegitimate. S_y	Legitimate. S'_y	Illegitimate. S''_y	
15	14,936,770	7,957,456	4,660,311	2,319,003	1,450,910	1,395,529	55,381	15
16	14,597,426	7,957,228	4,321,207	2,318,991	1,450,789	1,395,442	55,347	16
17	14,260,036	7,956,472	3,984,599	2,318,965	1,450,328	1,395,149	55,179	17
18	13,924,759	7,952,751	3,653,087	2,318,921	1,448,355	1,393,687	54,668	18
19	13,591,782	7,938,282	3,334,697	2,318,803	1,441,179	1,387,941	53,238	19
20	13,261,309	7,905,185	3,037,586	2,318,538	1,425,700	1,374,713	50,987	20
21	12,933,570	7,839,188	2,776,552	2,317,830	1,396,454	1,348,268	48,186	21
22	12,608,675	7,747,780	2,544,219	2,316,676	1,356,646	1,311,684	44,962	22
23	12,286,670	7,637,268	2,334,400	2,315,002	1,309,068	1,267,663	41,405	23
24	11,967,597	7,506,536	2,148,405	2,312,656	1,253,713	1,216,011	37,702	24
25	11,651,495	7,356,916	1,985,067	2,309,512	1,191,573	1,157,575	33,998	25
26	11,338,400	7,190,612	1,842,327	2,305,461	1,123,978	1,093,581	30,397	26
27	11,028,344	7,010,300	1,717,630	2,300,414	1,052,418	1,025,448	26,970	27
28	10,721,359	6,818,772	1,608,282	2,294,305	978,375	954,617	23,758	28
29	10,417,472	6,618,677	1,511,712	2,287,083	903,709	882,929	20,780	29
30	10,116,710	6,412,379	1,425,618	2,278,713	829,338	811,292	18,046	30
31	9,819,099	6,201,897	1,348,035	2,269,167	756,024	740,461	15,563	31
32	9,524,662	5,988,898	1,277,335	2,258,429	684,383	671,042	13,341	32
33	9,233,424	5,774,722	1,212,214	2,246,488	614,930	603,534	11,396	33
34	8,945,407	5,560,419	1,151,631	2,233,357	547,504	537,839	9,665	34
35	8,660,634	5,346,570	1,095,079	2,218,985	482,345	474,204	8,141	35
36	8,379,128	5,133,693	1,042,112	2,203,323	419,752	412,940	6,812	36
37	8,100,912	4,922,246	992,339	2,186,327	360,087	354,424	5,663	37
38	7,826,009	4,712,638	945,417	2,167,954	303,777	299,098	4,679	38
39	7,554,444	4,505,233	901,047	2,148,164	251,283	247,462	3,821	39
40	7,286,242	4,300,358	858,964	2,126,920	203,154	200,076	3,078	40
41	7,021,429	4,098,302	818,938	2,104,189	159,982	157,547	2,435	41
42	6,760,032	3,899,328	780,764	2,079,940	122,404	120,526	1,878	42
43	6,502,080	3,703,671	744,264	2,054,145	91,086	89,696	1,390	43
44	6,247,602	3,511,546	709,280	2,026,776	65,240	64,251	989	44
45	5,996,630	3,323,146	675,675	1,997,809	44,646	43,975	671	45
46	5,749,196	3,138,651	643,325	1,967,220	28,945	28,516	429	46
47	5,505,335	2,958,227	612,124	1,934,984	17,651	17,396	255	47
48	5,265,083	2,782,029	581,977	1,901,077	10,168	10,027	141	48
49	5,028,477	2,610,203	552,801	1,865,473	5,324	5,254	70	49
50	4,795,555	2,442,888	524,524	1,828,143	2,479	2,448	31	50
51	4,566,359	2,280,220	497,081	1,789,058	1,029	1,017	12	51
52	4,340,929	2,122,329	470,418	1,748,182	409	406	3	52
53	4,119,309	1,969,345	444,488	1,705,476	105	105	..	53
54	3,901,543	1,821,396	419,251	1,660,896	13	13	..	54
55	3,687,820	1,678,707	394,689	1,614,424	..	..	..	55
56	3,478,440	1,541,571	370,801	1,566,068	..	..	..	56
57	3,273,593	1,410,198	347,583	1,515,812	..	..	..	57
58	3,073,469	1,284,793	325,034	1,463,642	..	..	..	58
59	2,878,258	1,165,548	303,163	1,409,547	..	..	..	59
60	2,688,153	1,052,648	281,984	1,353,521	..	..	..	60
61	2,503,355	946,267	261,520	1,295,568	..	..	..	61
62	2,324,070	846,562	241,802	1,235,706	..	..	..	62
63	2,150,511	753,673	222,867	1,173,971	..	..	..	63
64	1,982,897	667,666	204,750	1,110,481	..	..	..	64

ENGLISH Life and Birth Table (continued).

Age. y	Total female population at and above each age y. Q_y	Of the total female population at and above each age y, the number of			Children born annually to women of the age y and upwards.			Age. y
		Wives (uxores). U_y	Spinsters (filiæ). F_y	Widows (viduæ). V_y	Legitimate and illegitimate. S_y	Legitimate. S'_y	Illegitimate. S''_y	
65	1,821,453	588,364	187,443	1,045,646	..	..	..	65
66	1,666,404	515,567	170,941	979,896	..	..	..	66
67	1,517,976	449,057	155,241	913,678	..	..	..	67
68	1,376,388	388,600	140,341	847,447	..	..	..	68
69	1,241,850	333,946	126,244	781,660	..	..	..	69
70	1,114,555	284,834	112,951	716,770	..	..	..	70
71	994,674	240,989	100,466	653,219	..	..	..	71
72	882,349	202,124	88,794	591,431	..	..	..	72
73	777,685	167,941	77,940	531,804	..	..	..	73
74	680,744	138,127	67,925	474,692	..	..	..	74
75	591,540	112,374	58,742	420,424	..	..	..	75
76	510,032	90,365	50,380	369,287	..	..	..	76
77	436,119	71,774	42,827	321,518	..	..	..	77
78	369,639	56,267	36,064	277,308	..	..	..	78
79	310,366	43,510	30,069	236,787	..	..	..	79
80	258,014	33,171	24,811	200,032	..	..	..	80
81	212,237	24,926	20,256	167,055	..	..	..	81
82	172,636	18,463	16,364	137,809	..	..	..	82
83	138,767	13,491	13,086	112,190	..	..	..	83
84	110,151	9,751	10,370	90,030	..	..	..	84
85	86,283	6,967	8,134	71,182	..	..	..	85
86	66,646	4,917	6,309	55,420	..	..	..	86
87	50,722	3,426	4,832	42,464	..	..	..	87
88	38,005	2,355	3,649	32,001	..	..	..	88
89	28,013	1,597	2,713	23,703	..	..	..	89
90	20,294	1,068	1,983	17,243	..	..	..	90
91	14,437	705	1,422	12,310	..	..	..	91
92	10,076	460	999	8,617	..	..	..	92
93	6,893	298	686	5,909	..	..	..	93
94	4,618	193	460	3,965	..	..	..	94
95	3,026	124	300	2,602	..	..	..	95
96	1,938	79	190	1,669	..	..	..	96
97	1,212	50	117	1,045	..	..	..	97
98	739	31	70	638	..	..	..	98
99	439	18	41	380	..	..	..	99
100	254	11	23	220	..	..	..	100
101	143	6	13	124	..	..	..	101
102	78	3	7	68	..	..	..	102
103	41	1	4	36	..	..	..	103
104	21	..	2	19	..	..	..	104
105	10	..	1	9	..	..	..	105
106	5	..	..	5	..	..	..	106
107	2	..	..	2	..	..	..	107
108	1	..	..	1	..	..	..	108
109		..	..	..	..	..	..	109